



Date of Application, 17th Jan., 1901—Accepted, 23rd Feb., 1901

COMPLETE SPECIFICATION.

“Improvements in Instruments for Administering Medicaments or the like.”

I, Dr. ALEXANDER LEVY of Hagenau, Alsace in the Empire of Germany, Surgeon, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

5 This invention relates to a means or appliance for conveying and introducing medicaments, such for instance as causticising solutions, into parts of the human body which are difficult of access, massage being simultaneously applied. The parts more particularly in question are the masculine urethra, the uterus, the nasal cavity and the like. The essential feature of the invention consists
10 in the head of the instrument being traversed for a certain length by numerous capillary passages which are intended to receive medicaments and to easily discharge same again when a slight pressure is applied.

Various forms of construction of the instrument are shown in the accompanying drawings, in which

15 Figure 1 is an elevation of an instrument intended for the masculine urethra; Figure 2 a longitudinal section of same; Figure 3 an elevation of an instrument destined for the uterus; Figure 4 a longitudinal section of same; Figure 5 an elevation of an instrument suitable for the nasal cavity; Figure 6 a longitudinal section of same; Figure 7 a section on an enlarged scale on the line *x y* of
20 Figures 2 and 4; Figure 8 a section on the line *v w* of Figure 6; and Figures 9 and 10 a modified form, in elevation and section respectively, of an instrument for massaging from the inside to the outside.

In general the medicament carrier according to the present invention has the shape of a catheter of ordinary length and calibre. The instrument *a* is made
25 of soft rubber. Inside the same there is a central longitudinal bore *b* serving essentially for guiding the instrument, whilst a silver wire of suitable thickness is employed as mandrel for the guidance.

The head of the instrument, according to requirements, is provided up to a certain length with fine intercommunicating and externally opening capillary
30 tubes *c*, which extend, in the catheter intended for the masculine urethra (Figures 1 and 2) for instance, to the length of 3 to 4 centimetres, in the catheter for the uterus (Figures 3 and 4) to from 10 to 12 centimetres, and so forth. The bore *b* is continued to the head of the instrument and connected with the capillary tubes *c* so that the easy insertion of the medicinal solution
35 and the discharge of the same is facilitated as the air contained in the capillary tubes can escape from the perforation *b*. No openings exist at the point *d* of the catheter, so that thus the actual point itself is closed and rounded as is usual in like instruments.

In the catheter for the uterus (Figures 3 and 4) a knob or stud is provided at
40 the side as is usual in the uterus probes at present in use, for the purpose of measuring how far the catheter has penetrated into the recess of the uterus.

In catheters for the nasal cavity (Figures 5 and 6) the head is formed into a broad flattened (leaf shaped) heart shaped end piece *f* which in similar manner is traversed by outwardly opening capillary passages. For other purposes a
45 suitable form must of course be given to the catheter.

[*Price 8d.*]

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When in use the head of the catheter is immersed in the medicinal solution, for instance a 20% solution of protargol, so that the capillary tubes become filled with the solution whilst the air from the capillaries escapes through the pipe *b*. The instrument is then inserted in the urethra or uterus and the liquid drawn into the head piece is discharged by means of a slight massage at the sides. The action of the instrument therefore does not consist merely in the use of a caustic solution, but in the use of a caustic solution with a simultaneous massaging. In the nasal cavity the liquid is automatically discharged by the pressure of the drawn back palate flap.

In treating catarrh of the tubes and central ear hole it is frequently advantageous to effect the discharge of the medicinal solution in other manner than by massage. This is then done by bringing the head of the instrument to the place to be treated and discharging the medicament by slightly blowing down the passage *b*.

Finally, especially in cases where massage from the outside can only be effected with difficulty, the instrument comprised in this invention may be formed in the manner shown in Figures 9 and 10. Here the central bore *b* also extends almost to the point of the instrument without however being connected with the capillary tubes *c*. The end *g* of the central tube *b*, which end is situated inside the catheter head, is so widened that a mandrel having a thickened somewhat spherically shaped end may be inserted in the tube *b* serving not only for guidance but also for internal massage.

This improved instrument admits of a simple and successful treatment of gonorrhea, chronic metritis, nasal catarrh and the like complaints. It is easily cleansed and made aseptic by being immersed in a disinfecting liquid which is frequently changed.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. An instrument for introducing medicaments, formed of india rubber in the form of a catheter, characterized by the suitably shaped head of the instrument being provided with numerous fine intercommunicating externally opening capillary tubes with which a central bore is in communication, substantially as hereinbefore described and shown.

2. An instrument for introducing medicaments such as described, having the end of the central bore which lies inside the instrument somewhat enlarged, with the object of receiving a mandrel provided with a thickened or enlarged end for the purpose of enabling a massage from the inside to the outside to be carried out, substantially as hereinbefore described and shown.

Dated this 8th day of January 1901.

W. P. THOMPSON & Co.
Of 6 Lord Street, Liverpool, Agents for the Applicant.

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Fig. 1.



Fig. 2.

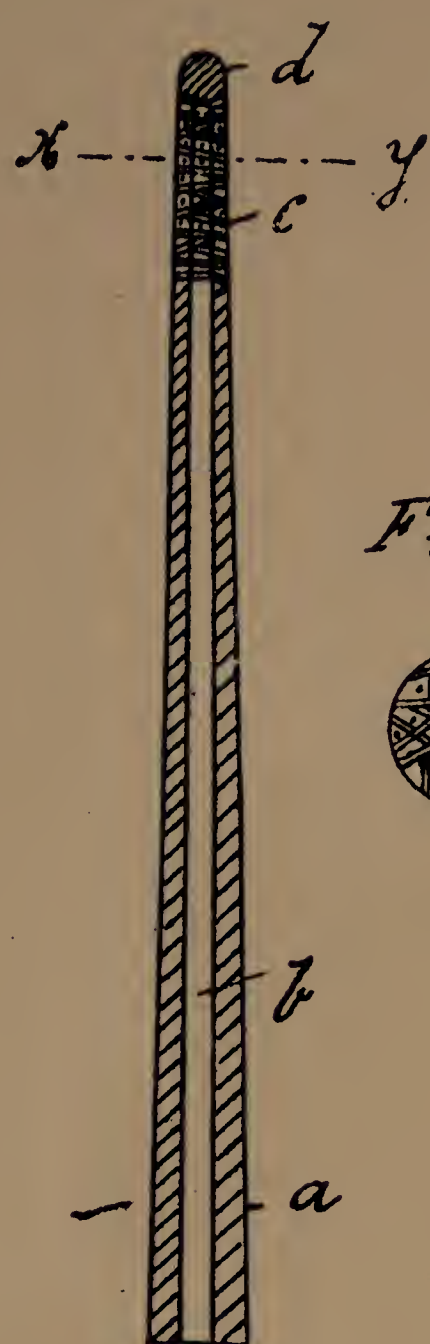


Fig. 3.

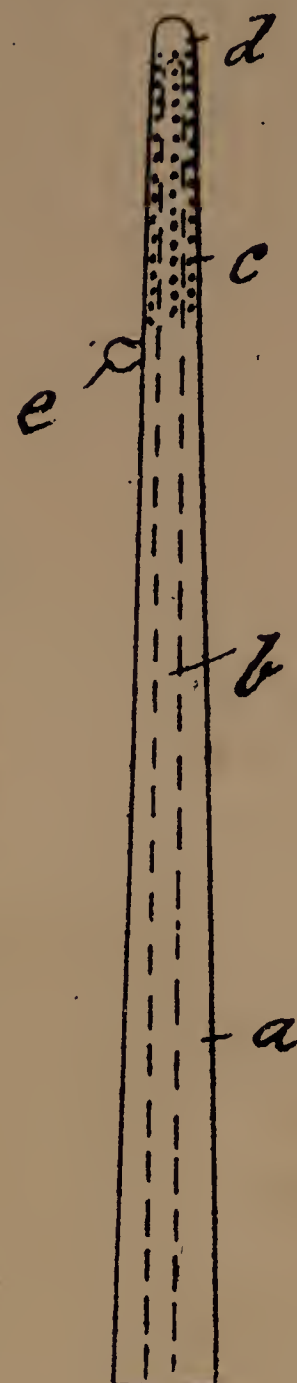


Fig. 4.

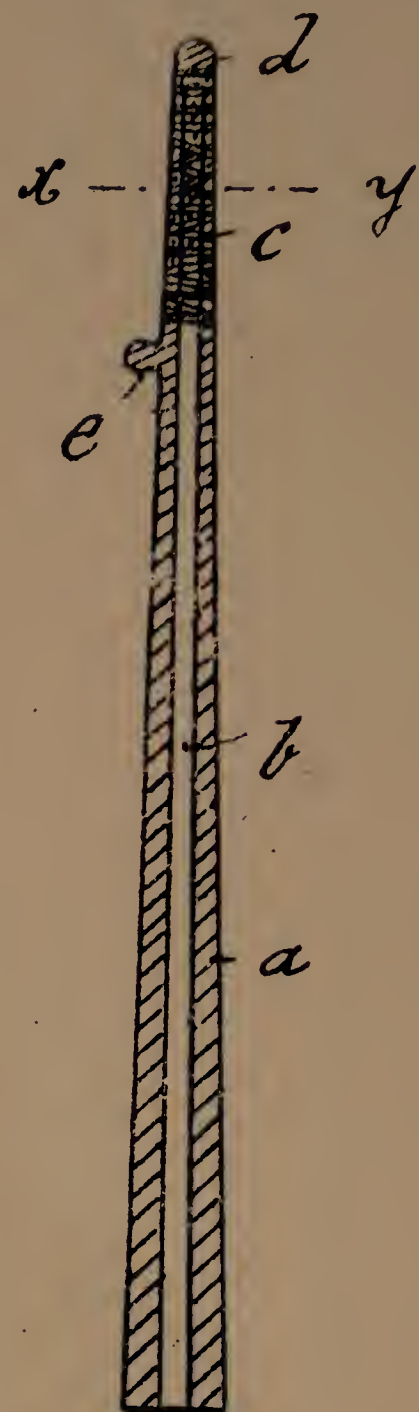


Fig. 7.

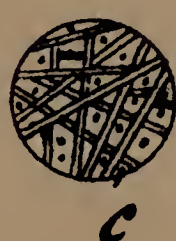


Fig. 5.

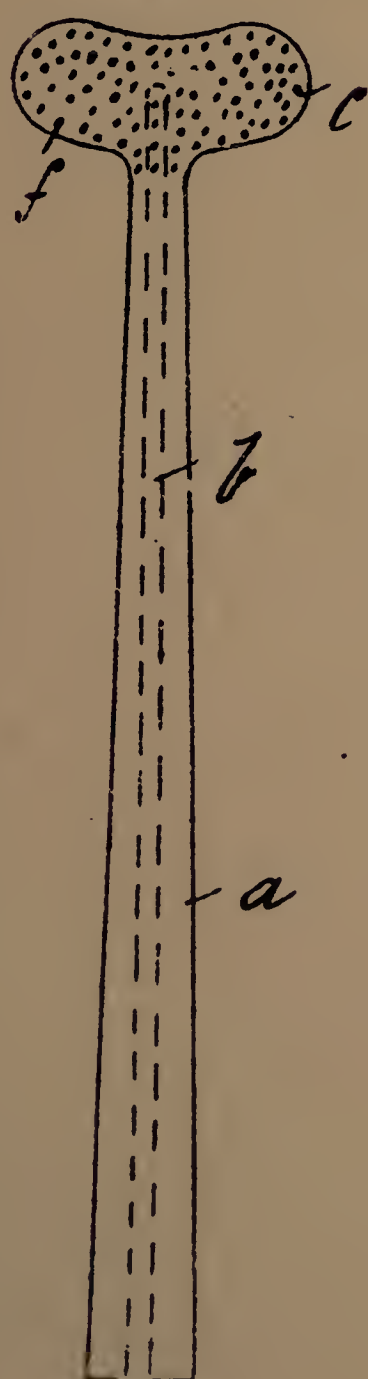


Fig. 6.

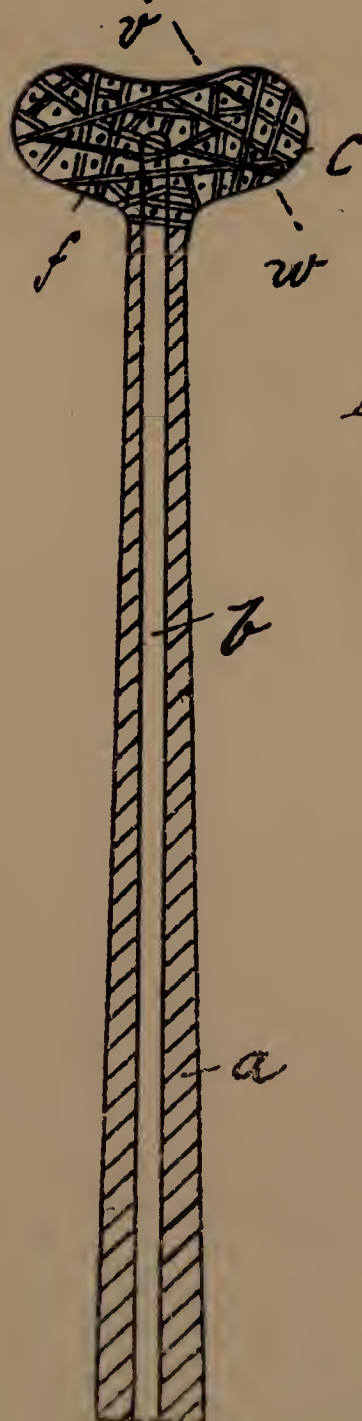


Fig. 9.



Fig. 10.

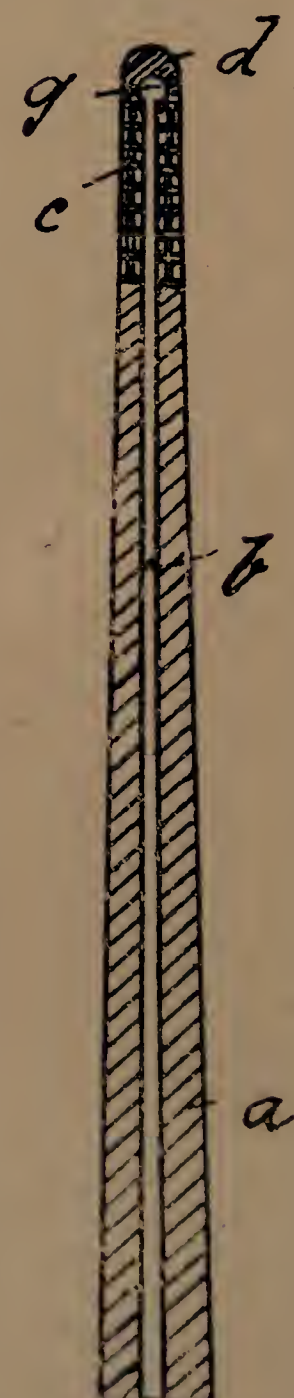
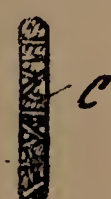


Fig. 8.



[This Drawing is a reproduction of the Original on a reduced scale.]

